IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A control device, comprising: ~~having~~

—____—a plurality of inputs to~~for~~ respectively receive~~ing~~ an input real value ~~(F_i),~~;

—____—a plurality of outputs to~~for~~ respectively output~~ting~~ a digital output value; ~~(Y_j),~~

_____—a memory to~~for~~ store~~ing~~ setpoint values ~~(S_i)~~ relating to the inputs and outputs; ~~,~~ and

—____—an allocator to~~for~~ allocate~~ing~~ a digital output value ~~(Y_j)~~ to one of the digital outputs as a function of a comparison of at least one of the input real values ~~(F_i)~~ with a corresponding setpoint value, _

~~characterized in that~~

—the setpoint values ~~(S_i)~~ respectively including~~have~~ _one of the state values 1, 0 and independence state value, applicable ~~an independence state value (D) can be applied~~ to at least one of the setpoint values ~~(S_i)~~ in the memory, and _

—the allocation of a digital output value ~~(Y_j)~~ to one of the digital outputs being capable of being ~~can be~~ carried out by the allocator independently of the at least one input real value ~~(F_i)~~ whose allocated setpoint value ~~(S_i) has~~includes the independence state value ~~(D)~~.

2. (Currently Amended) The control device as claimed in claim 1, further ~~which~~ comprising~~es~~ a first evaluator for converting input raw values ~~(R_i)~~ into digital input values ~~(X_i)~~ for the further processing as input real values.

3. (Currently Amended) The control device as claimed in claim 2, further ~~which~~ comprising~~es~~ a second evaluator, connected downstream of the first, for allocating the digital input values ~~(X_i)~~ to logical input states ~~(F_i)~~ for the further processing as input real values.

4. (Currently Amended) The control device as claimed in ~~one of the preceding~~ claim~~s~~ 1, wherein a plurality of sets of setpoint values ~~($S_{i,n}$) can~~ are respectively being storable~~d~~ for an output value or set of output values in the memory.

5. (Currently Amended) The control device as claimed in claim 1, further comprising~~one of the preceding claims, which has~~ a safety instrument by which the equipment to be controlled can be switched to a safety state.

6. (Currently Amended) The control device as claimed in claim 5, wherein the safety instrument switches to the safety state if the input real values ~~(F_i)~~ deviate from the corresponding setpoint values ~~($S_{i,n}$)~~ for more than a predetermined time.

7. (Currently Amended) The control device as claimed in claim 5~~ or 6~~, wherein the sets of setpoint values ~~($S_{i,n}$)~~ are checked with a check sum at fixed time intervals.

8. (Currently Amended) A method for controlling equipment, comprising: ~~by~~

~~—~~ receiving a plurality of input real values ~~(F_i),~~;

~~—~~providing setpoint values ~~($S_{i,n}$)~~ relating to inputs and outputs~~,~~;

~~—~~ establishing a digital output value ~~(Y$_j$)~~ as a function of a comparison of at least one of the input real values ~~(F$_i$)~~ with a corresponding one of the setpoint values ~~(S$_{i,n}$),~~ ; and ~~and~~

~~—~~ outputting the digital output value, ~~(Y$_j$),~~

~~characterized by~~

~~application of~~ an independence state value being applied ~~(D)~~ to at least one of the setpoint values ~~(S$_i$), and~~,

~~establishment of~~ the digital output value ~~(Y$_j$)~~ being established independently of the at least one input real value ~~(F$_i$)~~ whose allocated setpoint value ~~(S$_{i,n}$)~~ ~~has~~ includes the independence state value ~~(D)~~, wherein

~~—~~ the setpoint values ~~(S$_{i,n}$)~~ respectively include ~~have~~ one of the state values 1, 0 and independence state value ~~(D)~~.

9. (Currently Amended) The method as claimed in claim 8, wherein the reception of a plurality of input real values includes ~~(F$_i$) comprises~~ conversion ~~(S1)~~ of input raw values ~~(R$_i$)~~ into digital input values ~~(X$_i$)~~ for the further processing as input real values ~~(F$_i$)~~.

10. (Currently Amended) The method as claimed in claim 9, wherein the digital input values ~~(X$_i$)~~ are allocated to logical input states for the further processing ~~(S2)~~.

11. (Currently Amended) The method as claimed in ~~one of~~ claims 8 ~~to 10~~, wherein a plurality of sets of setpoint values ~~(S$_{i,n}$)~~ are respectively provided for an output value ~~(Y$_j$)~~ or set of output values.

12. (Currently Amended) The method as claimed in ~~one of~~ claim~~s~~ 8 ~~to 11~~, wherein the equipment to be controlled is switched to the safety state if the input real values ~~(F$_i$)~~

deviate from the corresponding setpoint values ~~$(S_{i,n})$~~ for more than a predetermined time.

13. (Currently Amended) The method as claimed in ~~one of~~ claim~~s~~ 8 ~~to 12~~, wherein the setpoint values ~~$(S_{i,n})$~~ are checked with a check sum at fixed time intervals, and the equipment to be controlled is optionally switched to a safety state.

14. (Cancelled)

15. (Cancelled)

16. (New) The control device as claimed in claim 2, wherein a plurality of sets of setpoint values are respectively being storable for an output value or set of output values in the memory.

17. (New) The control device as claimed in claim 3, wherein a plurality of sets of setpoint values are respectively being storable for an output value or set of output values in the memory.

18. (New) The control device as claimed in claim 6, wherein the sets of setpoint values are checked with a check sum at fixed time intervals.

19. (New) The method as claimed in claims 9, wherein a plurality of sets of setpoint values are respectively provided for an output value or set of output values.

20. (New) The method as claimed in claims 10, wherein a plurality of sets of setpoint values are respectively provided for an output value or set of output values.

21. (New) A control device, comprising:

input means for respectively receiving an input real value;

output means for respectively outputting a digital output value;

memory means for storing setpoint values relating to the inputs and outputs; and

allocation means for allocating a digital output value to one of the digital outputs as a function of a comparison of at least one of the input real values with a corresponding setpoint value, the setpoint values respectively including one of the state values 1, 0 and independence state value, applicable to at least one of the setpoint values in the memory means, and the allocation of a digital output value to one of the digital outputs being capable of being carried out by the allocation means independently of the at least one input real value whose allocated setpoint value includes the independence state value.